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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/587,453   | 01/30/2007  | Francois Reniers     | 293545US0PCT                    | 2033                        |
| 22850  | 7590        | 01/20/2010           |                                 |                             |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>MAYEKAR, KISHOR     |                             |
|  |             |                      | ART UNIT<br>1795                | PAPER NUMBER                |
|  |             |                      | NOTIFICATION DATE<br>01/20/2010 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/587,453 | <b>Applicant(s)</b><br>RENIERS, FRANCOIS |  |
|                              | <b>Examiner</b><br>Kishor Mayekar    | <b>Art Unit</b><br>1795                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Group I, claims 1-9 in the reply filed on 2 November 2009 is acknowledged. The traversal is on the ground(s) that "the Office has not provided any indication ... has not met the burden necessary to support the assertion". This is not found persuasive because the record reflects that all of these groups are patentably distinct and have been properly considered.

The requirement is still deemed proper and is therefore made FINAL.

2. This application contains claim 10 drawn to an invention nonelected with traverse in the reply filed on 2 November 2009. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### *Specification*

3. The specification is objected because the headings introducing various paragraphs of the specification have been omitted.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

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### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The disclosure is objected to because of the following informalities: the phrase "0,95 bar ... 1,05 bar" in page 3 and the inclusion of claims in page 4.

Appropriate correction is required.

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5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the recitation "a dielectric layer" is confusing in view of its identical recitation in claim 1 as whether they are the same or different.

***Claim Rejections - 35 USC § 102 and § 103***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 2-8 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Keras et al. (US 6,991,768 B2) or in light of Applicant's admission. Keras' invention is directed to a method for the treatment of odor and volatile organic compound contaminants in gas emissions. Keras discloses the method comprising the steps of passing a gas through a dielectric barrier discharge non-thermal plasma cell to create a range of reactive species in the gas, and mixing the gas to be treated with the gas having been passed through the dielectric barrier discharge non-

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thermal discharge cell to allow the reactive active species to react with the odor causing molecules and volatile organic compounds in the gas to be treated (claim 1 or c. 6, l. 47-54). Keras also discloses the cell being made of two electrodes and a layer of dielectric material located between the two electrodes (c. 4, l. 36-67), the gas being atmospheric air, that is containing oxygen, (c. 6, l. 47-54), and the controlling of flow of air (paragraph crossing c. 7 and 8). To the recited glow discharge as claimed in claim 1, since Applicant's admits in page 1 of the specification that a glow discharge is "sometimes called dielectric barrier discharges" due to the presence "of a dielectric between the electrodes", and since Keras' dielectric barrier discharge has a same operating condition as the claimed invention, Keras' dielectric barrier discharge is a glow discharge as claimed, in absence of evidence to the contrary.

As to the subject matter of claim 5, Keras discloses it in c. 14, l. 30-32.

As to the subject matter of claims 6 and 7, since Keras' invention is directed to a method for treating of odor and volatile organic compound contaminants in gas emissions, where the organic compounds include chlorine (c. 14, l. 13-32), and since Keras further discloses in paragraph crossing c. 9 and 10 that some contaminants include fluid and/or particle, it appears that Keras' process will lead one skilled in the art towards the limitation, in absence of evidence to the contrary.

As to the subject matter of claim 5, Keras discloses it in c. 9, l. 56-64.

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11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keras' 768 or in light of Applicant's admission and in view Rogers et al. (US 6,395,238 B1).

The differences between Keras as applied and the instant claims are the limitations recited in each of the instant claims. Rogers show in a non-thermal plasma treatment of a gas that the dielectric material is alumina in addition to glass (c. 4, l. 27-43) and the configuration of the electrodes can be non-planar in addition to planar (Figs. 5 and 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Keras' method such that the dielectric material is alumina and the electrode configuration is non-planar, as per the teaching of Rogers. One of ordinary skill in the art would have been motivated to make such modification because the selection of any of known equivalent dielectric materials and electrode configurations would have been within the level of ordinary skill in the art.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keras' 768 or in light of Applicant's admission. Keras as applied above further disclose that the products of the gas being treated are converted to products such as carbon dioxide or water (c. 2, l. 65 through c. 3, l. 3). As such, the determination or measurement of carbon dioxide in the products would have been within the skill of one of ordinary skill in the art.

### *Conclusion*



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13. Claims 1-9 are rejected.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/  
Primary Examiner, Art Unit 1795